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09/608,521

06/30/2000

Raju C. Bopardikar

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LAW OFFICES OF PAUL E. KUDIRKA
40 BROAD STREET
SUITE 300
BOSTON, MA 02190

EXAMINER

MIRZA, ADNAN M

ART UNIT

PAPER NUMBER

2445

MAIL DATE

DELIVERY MODE

12/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/608,521 | BOPARDIKAR ET AL. | |
| | Examiner | Art Unit | |
| | ADNAN M. MIRZA | 2445 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 44-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 44-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11,44-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blumenau (6,195,703) and further in view of Schaefer et al (6,157,927)..

As per claims 1,44 Blumenau disclosed apparatus for providing high-performance, scalable data processing and storage services to a client from a plurality of resources, comprising an access interface module which receives data storage requests, each including a data identifier (col. 12, lines 26-33), and data to be stored from the client and in response to each service request and based on a workload instead of a physical location of each of the plurality of devices dynamically selects a subset of the plurality of storage devices in which the data is transferred to be stored and so that the physical storage device location to which data corresponding to the same data identifier is transferred can change from request to request in order to dynamically distribute the workload across the plurality of device (col. 2, lines 5-21); One ordinary skill in the art at the time of the invention knows that “routing information based on the loading characteristic of the storage access request received at the switch inputs in order to balance loading of the storage access requests upon the outputs of the switch” is prime example of load

Art Unit: 2445

balancing, Where the routing information is based on the loading characteristic of the meaning workload of the memory.

However Blumenau fails to disclose a switch fabric for temporarily connecting the access interface module to the selected subset of the plurality of storage devices so that the data can be transferred to the selected subset of storage devices.

In the same field of endeavor Schaefer discloses, “The resource manager has a first interface that receives XATMI service request from the component and a second interface that receives directives (e.g.; prepare, commit, abort etc.) issued by the first transaction manager for a given global transaction (col. 8, lines 25-29). The resource manager further operates to store together, in a secure storage, information required by both the first transaction (e.g. MS DTC) and the protocol machine (e.g., OSI TP protocol machine) to recover from a failure. The information for a given branch is stored in the form of a log record. A pointer to the log record of a given branch is stored in the aforementioned record for that branch. By storing recover information needed by both the first transaction manager and the protocol machine together in single log record (col. 9, lines 31-41).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated The resource manager has a first interface that receives XATMI service request from the component and a second interface that receives directives (e.g.; prepare, commit, abort etc.) issued by the first transaction manager for a given global transaction. The

Art Unit: 2445

resource manager further operates to store together, in a secure storage, information required by both the first transaction (e.g. MS DTC) and the protocol machine (e.g., OSI TP protocol machine) to recover from a failure. The information for a given branch is stored in the form of a log record. A pointer to the log record of a given branch is stored in the aforementioned record for that branch. By storing recover information needed by both the first transaction manager and the protocol machine together in single log record as taught by Schaefer in the method and system of Blumenau to provide highly desirable resource management system and moving away from a single resource management system.

5. As per claims 2,45 Blumenau -Schaefer disclosed wherein the access interface module selects the subset of the plurality of resources based on the relative demand placed on the subset of resources (Schaefer, col. 8, lines 42-54).

6. As per claims 3,46 Blumenau -Schaefer disclosed wherein the switch fabric comprises a control switch fabric for transferring control information and a separate data switch fabric for transferring data (Blumenau, col. 2, lines 7-19).

7. As per claims 4,47 Blumenau -Schaefer disclosed wherein the control switch fabric is optimized for transferring control information and the data switch fabric is optimized for transferring data (Blumenau, col. 2, lines 29-41).

Art Unit: 2445

8. As per claims 5,48 Blumenau -Schaefer disclosed wherein the request for service includes control information and data and wherein the access interface module separates the control information and the data and transfers the data to the selected subset of resources over the data switch fabric (Blumenau, col. 6, lines 44-53).

9. As per claims 6,49 Blumenau -Schaefer disclosed wherein the data switch fabric comprises a none blocking crossbar switch for data transfer and the control switch fabric comprises an Ethernet switch for control information transfer (Schaefer, col. 28, lines 22-37).

10. As per claims 7,50 Blumenau -Schaefer disclosed further comprising a resource module connected to the plurality of resources for generating pre-allocation information that pre-allocates services from the plurality of resources in order to evenly distribute a workload 4 across the plurality of resources (Blumenau, col. 2, lines 5-21).

11. As per claims 8,51 Blumenau -Schaefer disclosed wherein the switch fabric connects the access interface module to the resource module so that the resource module can transfer the pre-allocation information to the access interface module (Schaefer, col. 28, lines 22-37).

12. As per claims 9,52 Blumenau -Schaefer disclosed wherein the access interface module selects a subset of the plurality of resources based on the pre-allocation information (Blumenau, col. 2, lines 5-21).

Art Unit: 2445

13. As per claims 10,53 Blumenau -Schaefer disclosed wherein the access interface module comprises a data memory which temporarily stores information transferred between the access interface module and the selected subset of the plurality of resources (Blumenau, col. 5, lines 49-57).

14. As per claims 11,54 Blumenau -Schaefer disclosed further comprising a plurality of access interface modules each access interface module receiving service requests from a plurality of clients (Schaefer, col. 28, lines 22-37).

Response to Arguments

15. Applicant's arguments filed 10/10/2008 have been fully considered but they are not persuasive. Response to applicant's arguments is as follows.

A. Applicant argued that prior art did not disclose, "Data corresponding to the same data identifier or address may be stored in different physical storage device locations based on criteria such as load balancing or availability".

As to applicant's argument Blumenau disclosed, "The method further includes the changing the routing information stored in the memory based on the loading characteristics of the storage access requests received at the switch inputs in order to balance loading of the storage access requests upon the outputs of the switch" (col. 2, lines 16-20). One ordinary skill in the art at the

Art Unit: 2445

time of the invention knows that above statement from Blumenau is prime example of load balancing where routing information depends on the load of data.

Conclusion

16. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Adnan Mirza whose telephone number is (571)-272-3885.

Art Unit: 2445

18. The examiner can normally be reached on Monday to Friday during normal business hours. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571)-272-3933. The fax for this group is (703)-746-7239. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866)-217-9197 (toll-free).

/Adnan M Mirza/
Examiner, Art Unit 2445

/Larry D Donaghue/

Primary Examiner, Art Unit 2454